**IT Applications, Unit 4**

**Ch 4, Organisations and information needs, p 129-136**

What is an information system?

1. Define **an information system.**

A system is a **group of components that work together.** A system can be something simple, processing and assembling burgers in McDonalds or as complex as launching a space shuttle.

1. **List the 4 components of an information System.**
2. **Equipment** (software and hardware)
3. **Data** to be manipulated
4. **Personal** to oversee the system
5. **Procedures** to ensure that data is manipulated in a efficient manner.

**Components of an information system**, p 131

**Equipment**

**1 Software**

**Elaborate under each of the following four main types of software.**

1. **Operation or system software**

Controls the actual operations of the computer hardware. Some of the functions incl. starting the computer, execution and storing application programs, storing and retrieving files, sending info to output devices and performing services such as formatting hard disks.

1. **Application software**

Provides support to computer uses. Incl. word processers, spreadsheets and databases. In addition there is software for creating web pages, browsing the internet, desktop publishing, making presentations and creating and manipulating images

1. **Utility software**

System software that performs a particular task. Incl. Diagnosing problems, scanning disks, and defragmenting disks. Examples are programs that create backups and convert data into different formats and virus protection programs, e.g. Norton AntiVirus.

1. **Programming software**

Programming language is a set of words or codes that allows a programmer to communicate instructions to a computer. Examples are Hypertalk, HTML, PHP and Java.

**2 Hardware**

**a. List the 5 core components of a pc.**

**1. CPU (system Unit)**

**2. Hard Disk**

**3. Monitor**

**4. Keyboard**

**5. Mouse**

**3 Data**

1. **Describe the nature of data.**

Initially, when data is first entered into a computer it is aw and unorganised. It may be numbers, letters, words, image or sounds. For data to have any significance it must be organised and manipulated. For example, numbers entered into a spreadsheet will be meaningless unless given some context, i.e. given classifications and calculations.

**4 Personnel**

**1 Who are the personnel in organisations?**

The personal in organisations are commonly referred to as the **users,** a broad term describing employees, customers, sellers and various other people.

**5 Procedures**

1. **What is the purpose of procedures?**

A procedure is a **series of steps that are followed so that tasks are performed uniformly and consistently.**

**Information characteristics in organisations,** p 133

**Information flow**

1. **What is meant by information flow?**

Information flow refers to the effective and efficient flow of information between the four hierarchy levels (Senior management, middle management, operational management and operational workers)

1. **List the four hierarchy levels within a large organisation and the people who are at each of these levels.**

Senior management: Chief executive officer, president, vice-president – make strategic decisions

Middle management: department directors – make tactical decisions

Operational management: section managers – Operational decisions

Operational workers – day-to-day decisions

**Structure of information, p 134**

Describe the following categories or structures of information and which hierarchy level uses the information.

1. **Detail reports –used by operational management**

Involve the communication of all the assembled records. One line of the detail report is assigned to each record. For example, a student wanting to know the result of their assessment might be provided with a detailed report that incl. a comment on each of the criteria, the percentage, the average of the class and a weighing in relation to other assessment tasks.

1. **Summary reports – used by middle and senior**

Summary reports are a brief version of a detail report in that they use totals and averages rather than reporting individual items.

1. **Aggregate reports - middle**

Similar to detail reports, except they only relate to one particular factor or subject. E.g. if the middle management wants to find the sales record of a product over a extended period of time they will use the aggregated sales report.

1. **Sample reports - Senior**

A section of the detailed information that provides senior management with an idea of the overall situation.

1. **Exception reports.**

Identifies data that shows variation from the set or target result.

**Decision-making in organisations, p 135**

Under each of the following levels of management describe the characteristics of decision making made, strategic, tactical, operational and day-to-day decisions.

1. **Decision-making by senior management**

Decision making by senior management is often referred to as strategic decision making and can involve very complicated problems that are relevant to the long term goals of the company. Some decisions can take years to make. When making a strategic decision senior management personal will often study market trends, choose new products to make and sell, analyse social, legal and environmental concerns, adjust management structure amongst other things.

1. **Decision-making by middle management**

Middle management make tactical decisions to solve problems that affect the running of the company. Each manager runs their own department within the organisation. A staff member in middle management could make decisions related around human resources, sales, marketing, accounts, or information and communications technology. They are also responsible for making sure the strategic decisions made by senior management are carried out. Most decisions in middle management take weeks or months.

1. **Decision-making by operational management**

Operation management deal with day to day operational decisions, e.g. directing customer complaints, replacing a sick worker, ordering stock. These decisions are made on the spot and do not have a lasting effect on the company although they do affect the morale of workers and customers.

1. **Decision-making by operational workers**

Operational workers make day-to-day decisions that help the efficient running of the business. Workers are usually the first point of contact with the public. They make decisions such as: who is in the next queue, what type of software is req. For a particular task,etc.